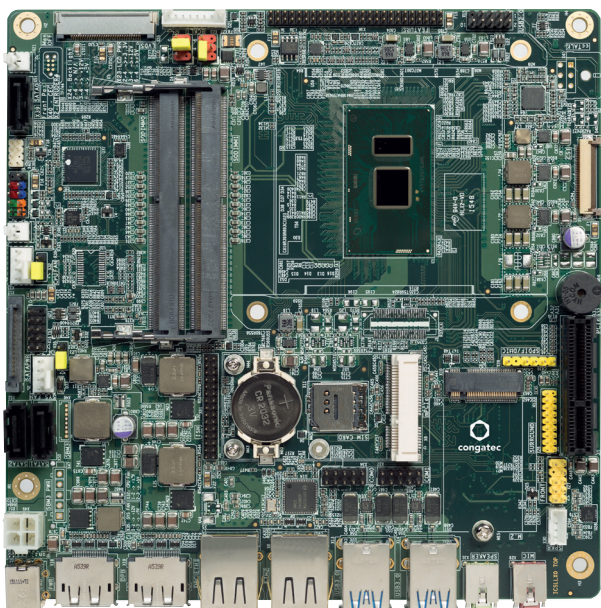


INDUSTRIAL THIN MINI-ITX

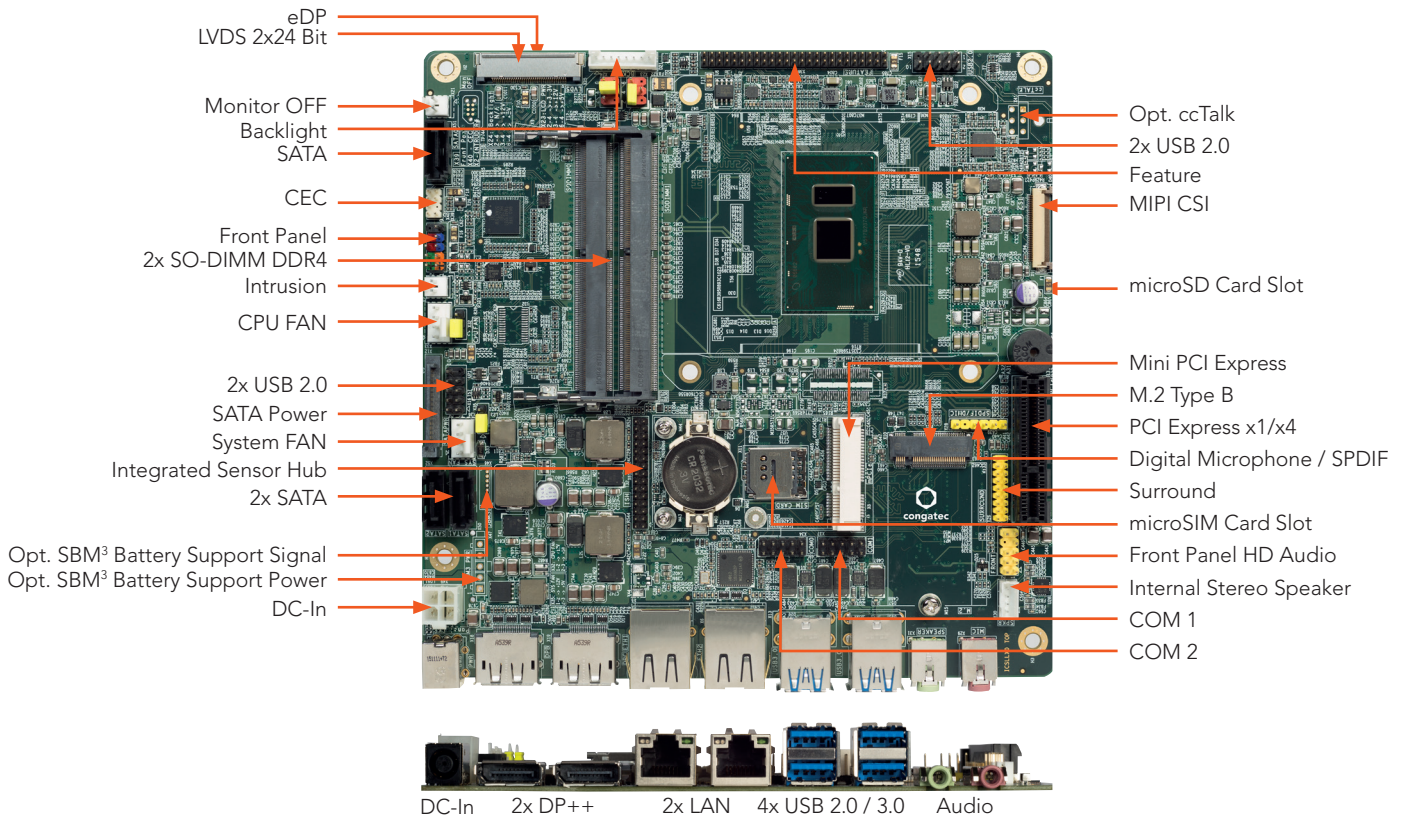
conga-IC170



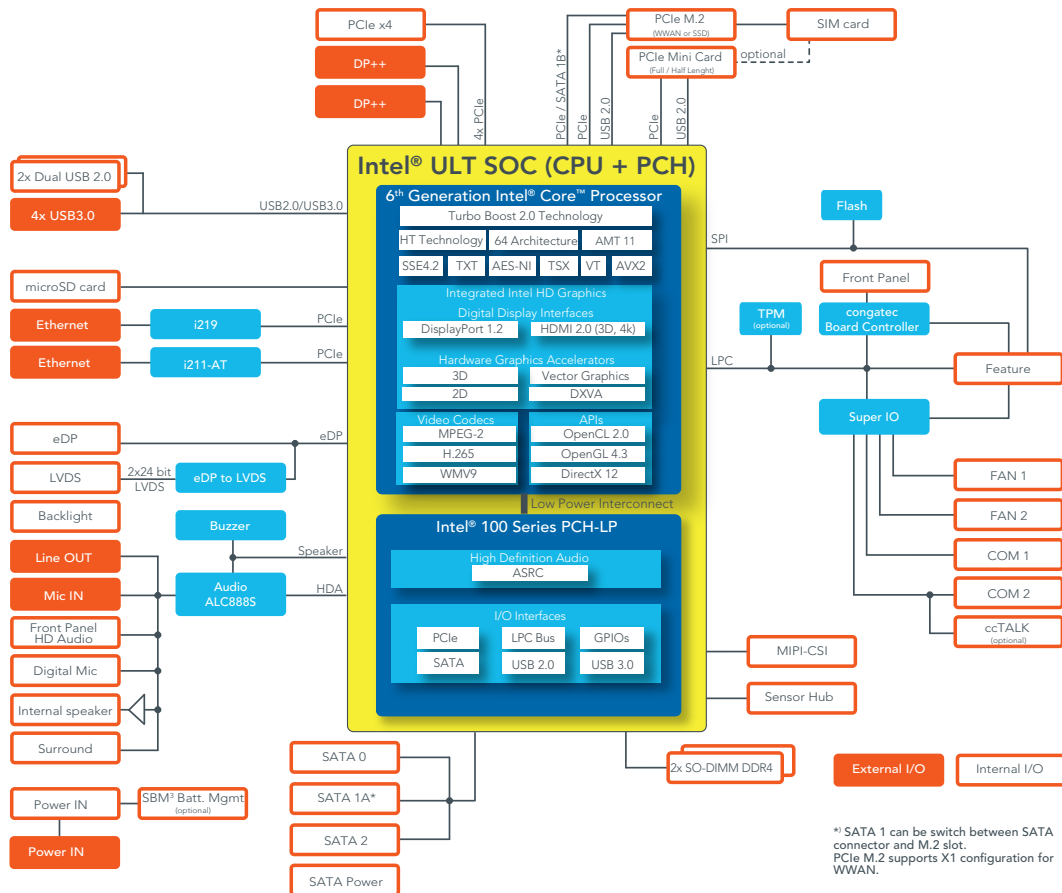
- Highest Performance Thin Mini-ITX board
- 6th Generation Intel® Core™ Mobile SoC U-Processors
- Improved Graphics Performance with HD500 Series
- Wide Range Power Input 12-24 Volt
- congatec embedded Bios and Board Controller Features

Formfactor	Industrial Thin Mini-ITX 170 x 170 x 20 mm ³					
CPU	Intel® Core™ i7-6600U	2.6 GHz Dual Core	Turbo Boost 3.4 GHz	4 MB Cache	TDP 15W cTDP 7.5W	Intel HD Graphics 520
	Intel® Core™ i5-6300U	2.4 GHz Dual Core	Turbo Boost 3.0 GHz	3 MB Cache	TDP 15W cTDP 7.5W	Intel HD Graphics 520
	Intel® Core™ i3-6100U	2.3 GHz Dual Core		3 MB Cache	TDP 15W	Intel HD Graphics 520
	Intel® Celeron® 3955U	2.0 GHz Dual Core		2 MB Cache	TDP 15W	Intel HD Graphics 510
	Intel® Turbo Boost Technology Intel® Hyper-Threading Technology (HT) Intel® Advanced Vector Extensions 2.0 (AVX2) Intel® Advanced Encryption Standard New Instructions (AES-NI) Integrated dual channel memory controller up to 33.3 GByte/sec. memory bandwidth Integrated Intel® HD Graphics 500 series with dynamic frequency up to 1.05 GHz Intel® Clear Video HD Technology Intel® Virtualization Technology (VT) Intel® Trusted Execution Technology (TXT) Intel® Streaming SIMD Extensions 4.2 (SSE4.2) PCLMULQDQ Instruction Intel® Secure Key Intel® Transactional Synchronization Extensions (TSX)					
DRAM Memory	Support for 2x SO DIMM Socket (dual channel DDR4 up to 2133 MT/s) max. 2x 16 GByte					
Ethernet	1x Intel Gigabit Ethernet PHY i219-LM 1x Intel Gigabit Ethernet Controller i211-AT					
Sound	High Definition Audio Interface Realtek ALC 888S 7.1-channel					
Graphics	Next gen Intel® HD Graphics with OpenCL 2.0 OpenGL 4.X and DirectX12 support up to three independent displays: HDMI 1.4, DVI, DisplayPort 1.2 High performance hardware MPEG-2 decoding WMV9 (VC-1) and H.264 (AVC) support Blu-ray support @ 40 MBit/s					
Graphic Interfaces	1x 24-bit Dual Channel LVDS Interface or eDP (x4) and 2x DisplayPort					
Internal Connectors	1x PCIe x4 slot (Gen.3) 1x full/half-size Mini PCIe slot M.2 type B 2242 connector 3x SATA (6G) (can be conf. as RAID), one shared with M.2 1x SATA power 4x USB 2.0 1x LVDS (2x24 bit) 1x Embedded DisplayPort (x4) 1x backlight (power & control) 1x monitor off 1x surround 1x front panel HD audio 1x digital microphone (SPDIF) 1x internal stereo speaker 2x serial port (COM2 opt. as ccTALK) 1x feature connector (8 Bit general purpose I/O) connector for Integrated Sensor Hub 1x front panel (power switch, LEDs, reset) 1x intrusion (case open) 1x fan CPU 1x fan system 1x internal power header (12-24 V) 1x CEC 1x microSIM card slot 1x microSD card slot 1x opt. battery header signal + power (SBM3)					
congatec embedded Controller	Multi-Stage watchdog Non-volatile user data storage Manufacturing and board information Board statistics BIOS setup data backup I ² C bus (fast mode, 400 kHz, multi-master) Power loss control					
External Connectors (Rearpanel)	2x DisplayPort++ Audio In Line Out 2x LAN RJ45 4x USB 3.0/2.0 1x DC-In (12-24 V)					
Embedded BIOS	AMI Aptio® 2.X (UEFI) BIOS					
Security	The conga-IC170 can be optionally equipped with a discrete "Trusted Platform Module 2.0". It is capable of calculating efficient hash and RSA algorithms with key lengths up to 2048 bits and includes a real random number generator. Security sensitive applications such as gaming and e commerce will benefit also with improved authentication, integrity and confidence levels.					
Power Specification	Power Management ACPI S3/S4/DeepSx Wake on time from S5 Power Supply 12-24 V 2 x fan (CPU / system) monitored & controlled					
Operating Systems	Microsoft® Windows 10 Microsoft® Windows 8 Microsoft® Windows 7 Linux Microsoft® Windows® 7/8 embedded Standard					
Power Consumption	Typ. application: tbd. see manual for full details					
Temperature:	Operating: 0 .. +60°C					
Humidity Operating:	Operating: 10 - 90% r. H. non cond.					
Size	170 x 170 x 20 mm ³					

conga-IC170 | Connectors



conga-IC170 | Block diagram



* SATA 1 can be switch between SATA connector and M.2 slot. PCIe M.2 supports X1 configuration for WWAN.

conga-IC170 | Order Information

conga-IC170	PN	Description
conga-IC170/i7-6600U	052703	Thin Mini-ITX board based on 6 th Gen Intel® Core™ i7-6600U dual core processor 2.2 GHz, 4 MB cache, 2133 MT/s dual channel DDR4 SODIMM memory interface
conga-IC170/i5-6300U	052700	Thin Mini-ITX board based on 6 th Gen Intel® Core™ i5-6300U dual core processor 2.4 GHz, 3 MB cache, 2133 MT/s dual channel DDR4 SODIMM memory interface
conga-IC170/i3-6100U	052701	Thin Mini-ITX board based on 6 th Gen Intel® Core™ i3-6100U dual core processor 2.3 GHz, 3 MB cache, 2133 MT/s dual channel DDR4 SODIMM memory interface
conga-IC170/3955U	052702	Thin Mini-ITX board based on 6 th Gen Intel® Celeron® 3955U dual core processor 2 GHz, 2 MB cache, 2133 MT/s dual channel DDR4 SODIMM memory interface

Accessories	PN	Description
conga-IC97/CSA	052252	Active cooling solution for conga-IC87 and conga-IC97 with 12V fan and Thin Mini-ITX height
conga-IC87/Retention Frame	052254	Retention frame for standard cooling (PN: 052252) for conga-IC87 and conga-IC97
conga-IC170 IO Shield Standard Size	052751	IO shield for conga-IC170 with Standard Mini-ITX height
conga-IC170 IO Shield Thin Size	052752	IO shield for conga-IC170 with Thin Mini-ITX height
DDR4-SODIMM-2400 (4GB)	068790	4 GByte DDR4 SODIMM memory module 2400 MT/s
DDR4-SODIMM-2400 (8GB)	068791	8 GByte DDR4 SODIMM memory module 2400 MT/s
DDR4-SODIMM-2400 (16GB)	068792	16 GByte DDR4 SODIMM memory module 2400 MT/s
conga-Thin MITX/eDP to DP Adapter	052231	eDP to standard DisplayPort evaluation adapter for congatec Thin Mini-ITX boards
conga-Thin MITX/eDP to HDMI Adapter	052232	eDP to standard HDMI evaluation adapter for congatec Thin Mini-ITX boards
conga-Thin MITX/LVDS Adapter	052233	LVDS pin header evaluation adapter for congatec Thin Mini-ITX boards
PS65	10000145	65 Watt power supply, 19V, 3.42 A, plug 7.4x5.1x12.5mm
PS90	10000146	90 Watt power supply, 19V, 4.74 A, plug 7.4x5.1x12.5mm
cab-ThinMini-ITX-UART	14000121	UART cable with 9pin DSUB connector for congatec Thin Mini-ITX family
cab-ThinMini-ITX-eDP 1-1	14000129	eDP 1-1 cable for congatec Thin Mini-ITX family. Both sides are with 40pin ACES eDP connector plug.
cab-ThinMini-ITX-LVDS-OE	14000125	LVDS cable with open end for congatec Thin Mini-ITX family. Can be used also for eDP with open end.
cab-ThinMini-ITX-BKLT	14000127	Backlight cable for congatec Thin Mini-ITX family
cab-DP to HDMI Passive	14000128	Passive DisplayPort to HDMI cable
cab-ThinMini-ITX-USB20-Single	14000122	Single USB 2.0 cable for congatec Thin Mini-ITX family
cab-ThinMini-ITX-USB20-Twin	14000123	Dual USB 2.0 cable for congatec Thin Mini-ITX family
SATA III cable 30cm, straight/straight	48000029	SATA III cable with 30cm length, shielded, end connectors straight/straight
SATA III cable 30cm, down/straight	48000030	SATA III cable with 30cm length, shielded, end connectors down/straight
cab-ThinMini-ITX-SATA-Power	14000120	SATA power cable for congatec Thin Mini-ITX family. One end 15 pin SATA connector to to 3x15 pin SATA connector



Aluminum cooler with fan protection for optimized air flow
PN 052252



Bottom view with phase change material
PN 052252



Solid retention frame to be mounted at the bottom side of the board
PN 052254